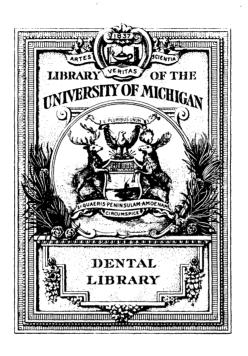
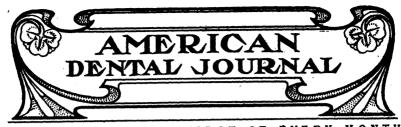
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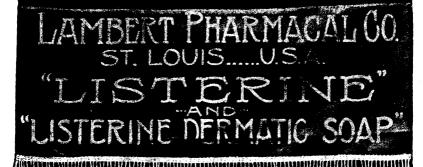






PUBLISHED ON THE FIRST OF EVERY MONTH

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GOLD MEDAL

HIGHEST AWARD

LEWIS & CLARK CENTENNIAL EXPOSITION PORTLAND OREGON 1905.

GOLD MEDAL ST. LOUIS, 1904



BRONZE MEDAL PARIS, 1900



ORTHODONTIA.

BY J. N. M'DOWELL, D. D. S.

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CHAPTER XV.

In case of delayed eruption, as in Fig. 1, it becomes necessary to lance the tissues and draw the tooth down. The age of this patient was 9½ years. Here the eruption of the right central is about three years behind time, while the left central has erupted directly over the lateral. The first consideration is to secure good attachment to the imbedded central. To do this, lance the gum tissue, making a cross

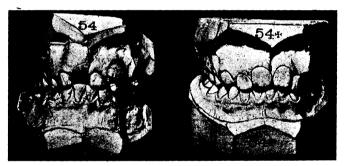


Fig. 1.

incision. In this incision pack cotton wet with carbolic acid. Over this place a larger piece of cotton to protect the lip; allow to remain about ten minutes. The carbolic acid causes the tissue to slough away by the next day with very little hemorrhage. Carefully remove the dead tissue, then drill a pit, same size as a common pin, and cement the pin head spur in the whole length of this spur before cementing in; should not be over $2\frac{1}{2}$ milimeters in length. Do this at a point where it will not rotate the tooth drawing it down. As it takes time drawing down teeth so far, it is necessary to secure strong anchorage, stationary anchorage, in the lower arch if possible, as the continual drawing down pressure will depress the upper teeth and elongate the

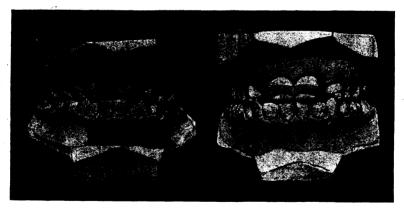
lower to some extent, unless a very strong anchorage is secured. To do this, band every available tooth to assist anchorage. In this case the bands of the upper first molar and second bicuspid on both sides



Fig. 2.

were soldered together. Bands were placed on all of the other teeth. Notches were cut in all the plain bands and the arch is ligated tightly to these teeth, the nuts placed distal to the tube on the molar bands. A spur was soldered to the wire arch over which rubber ligature was hooked (Fig. 2). Later, as the teeth come well down, secure anchorage to the lower teeth by banding them, soldering spurs on the bands and hooking rubber ligatures on these.

Fig. 4 is a cast of a case aged 9. The upper laterals have failed to erupt. The anterior part of the upper arch is contracted until the space for the laterals is occupied by the centrals. The centrals have moved backward until they almost touch the cuspids. The

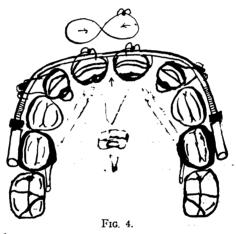


Frg. 3.

uppers occlude inside of the lower and the lower laterals, which are just erupting, are being rotated for want of space. In this case it is necessary to enlarge both arches in the region of the cuspids; the second temporary molar in both arches were banded, the centrals and cuspids in the upper, and the centrals, laterals and cuspids in the lower arch were banded with spurs on the lingual surface of the lat-

ter for rotating. Then the wire arch was used on the upper and lower. The reciprocal force for moving the centrals in the upper arch forward and the central and lateral in the lower arch forward was gained by soft soldering spurs on the arches just distal to the cuspids, bend the wire arches so that they are a trifle wider at the cuspids; then pass the ligature wire around the cuspids and around the arch and distal to the spurs; the pressure here on the cuspids is lateral and backward, thus giving a forward movement to the arch. Then the nuts are tightened. The other teeth being ligated to the arch, are moved forward, giving reciprocal force for enlarging the anterior part of the arches (Fig. 5). A wire around the centrals soon closes the centrals up.

Senarated Teeth.—The condition known as a little separation of the centrals is a trap set by nature for the unwary. To close the



space between the incisors by drawing them together not only looks easy but is easy, but to make them stay there-"ah, there's the rub." This condition of malocclusion may be the result of one of five conditions, or it may come from two or more or all five conditions. The forces that will cause this separation are, so-called: Enlarged frenum labii, enlarged tongue, disease of tissue surrounding the teeth, the lower incisors continually striking against the lingual surface of the upper incisors, and, last, the habit of pressing the tongue up against the centrals and into the separation between the teeth, making them separate much faster. These teeth may be drawn together with wire or rubber, or with a traction screw as in Fig 6, but they will not remain. Usually there is more or less protrusion associated with this condition and they may be moved backword with the wire arch with

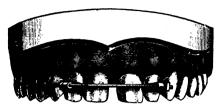


Fig. 5.

the nuts to the distal of the tube on the molar teeth, but the condition will return again and again unless the cause is removed. When there is this separated appearance in children it is usually due to an over-developed frenum labii and over-developed tongue, accompanied by the habit of keeping the end of the tongue up between the teeth. In adults it is usually the result of disease of the peridental membrane and changes in the occlusion of the distal teeth, permitting the lower anterior to strike the upper. But all of the conditions must be looked for in every case. This condition of separation of the incisors occasionally appears in the mouths of cornet and clarionet players. In the former the tissues of the upper lip seem to mold

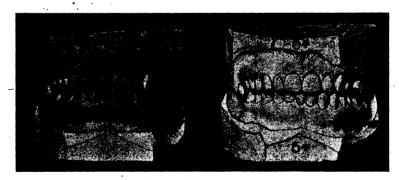


Fig. 6.

themselves into a V-wedge, and when pressure is applied in playing, the tissues press into the separation and hold the teeth apart. The author has treated several cases by banding the teeth with gold, soldering a gold strip at the lingual and labial side to prevent the escape of air and prevent further separation.

Fig. 7 is a case of separated incisors, as the result of the lower anterior teeth striking against the upper, causing separation. The age of the patient was 38 years. The distal teeth were elongated, by taking advantage of the spring pressure of wire arch gauge 16 to depress and draw the anterior teeth back and elongate the distal teeth. The tubes were soldered on the molar teeth so that they pointed a little higher than the centrals; then the arch was sprung down



Fig. 7.

and hooked into the notches on the centrals and the nuts were tightened distal to the tubes on the molar bands (Fig. 8). This appliance drew them backward, depressed them, and at the same time elongated the back teeth, thus opening the bite sufficiently to allow the required backward movements of the centrals. The best method to follow here is to place a rubber wedge under the arch on one central and igate the other central to the arch (not shown); at the end of the week reverse. This practically forces one tooth backward at a time. Such cases as a rule should be retained several years by soldering the six anterior bands together.

In case the separation is due to disease of the soft tissues or enlarged tongue, one may never hope for a permanent success, unless it be to enlarge both of the arches, moving the teeth forward until the anterior space is closed up. The distal moved forward will create more or less space which must be retained. In case it is due largely to the frenum labii, the lip attachment should be clipped and that part of the frenum between the teeth removed.

(To be continued.)

PROSTHETIC DENTISTRY.

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CHAPTER XXXIII.

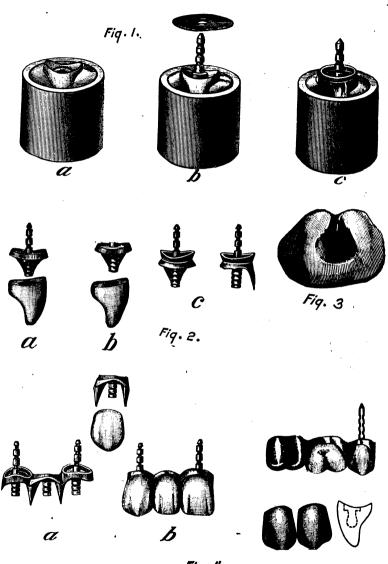
We are still considering the proposition of the removable or detachable porcelain teeth as they relate to crown and bridge work, and the deep interest manifested in the preceding chapter, which dealt with the Steele detachable tooth, leads me to make a few additional observations regarding this excellent method.

Some have asked the question as to the exact process of investment, and in reply will say that when the case is properly set up and you are ready to invest the case, carefully remove the porcelain facings, brush or paint the tube and adjacent surfaces of gold, which were in direct contact with the porcelain facing, with either rouge-fluid or whiting, and by this means you prevent any solder or flux from adhering to the portion of metal which is to directly back the facings. The preparation known as anti-flux is a splendid fluid for this purpose. When soldered and trimmed, slip on the facings with great care; never force them if they should stick, but carefully remove the obstruction. A small piece of borax or investment, or a turned edge of the metal, might prevent them from going on smoothly. Always remove any interfering particles.

The facings should be *cemented* on after the piece is finished and tried in the mouth. Use a smooth, even working cement, place it over the tube and backing and slide the facings to position.

The incisal end of the backing has been left longer than the facing purposely, and it now should be burnished over the end of the tooth according to the judgment and taste of the operator.

The argument is advanced that the cement holds better because of the cylindrical form of the metal attachment, though I believe the greatest merit of the metallic anchor rests in the requiring a similar opening in the tooth, and hence adds no opportunity for porcelain fracture. If the metallic backing had a rib of metal of a square form and sharp shoulders, the porcelain would not complement the metal, besides offering likelihood of weakness of fracturing area.



Fiq.4.

The problem of cements in its prosthetic application will be considered in a later chapter.

THE DAVIS CROWN.

The Davis crown in this chapter will be treated from the standpoint of its availability in bridges, indicating preference for removable porcelain substitutes. Incidentally, I desire to call attention to the fact that the Davis crown has made the pronounced record of coming into quicker use and being more favorably employed than anv crown that has been brought to the notice of the profession. It has been but a few years in attaining prominent and general recog-Primarily, it has the unequaled province of life-like shade; it possesses that essential so long dreamed of and laboriously sought for-natural appearance-and in this latter element lies its cardinal virtue, the method of setting, the ease of adjustment; its general applications are really secondary, since the practitioner will gladly welcome toil, eagerly consume time and liberally pay for material; provided that the product of his energies reward him with the comforting thought that the crown appears natural. Well, the Davis crown has this attribute, and we now consider it in its capacity as a replaceable or detachable tooth, leaving the merit of its individual crown merits for a later article.

Possibly the most accurate and also simplest method for accomplishing this basal metal work was proposed by Dr. H. J. Combs of Chicago, whose systems of making the encasement is as follows:

In order that the coping may be brought well into the approximal space, the cuspid should be hollowed out on the distal approximal surface. This forms a festoon of gold and allows the solder, used to join the copings, to rest directly on a portion of the cap, adding materially to the strength of the latter.

To finish the cuspid, after grinding sufficiently, press the cutting edge into the softened dental lac (Fig. 1-a), protecting and holding it firmly while swaging the coping over the cuspid or porcelain tooth. Fit the post, with the shoulder previously mentioned, into the tooth, being careful to seat the shoulder perfectly into the recess or socket of the tooth (Fig. 4-b).

For the coping punch a hole through 32 g. 22 k. gold (Fig. 1-b), and press it firmly over the protruding portion of the post and tooth, and, with the soft plunger, swage it to place (Fig. 1-c).

It may be necessary to slightly burnish the sharp angles in order

to secure a perfect fit. The post should then be soldered to the coping (Fig. 5-a—showing relative position). Care must be exercised that the solder shall not flow beyond the margin of the shoulder of the post inside of the coping. The danger of this may be obviated by a coating of whiting around the marginal line of contact between the shoulder and coping.

The coping of the cuspid may now be waxed onto the cap (Fig. 1-b), and then removed for investment and soldering (Fig. II-c). To invest the abutments after the coping and cap have been waxed together, carefully fill cap and coping with investment material and trim it down until the entire surface of both are exposed to the blow pipe (Fig. III). If you do not succeed in flowing the solder all over the platinum cap it may be easily accomplished after removing it from the investment by holding it in the pliers and flowing more solder over that portion not covered.

Replace the porcelain tooth upon the coping and place on the model. Both abutments having been finished, the work has now reached the point where the dummies are to be prepared. They are constructed in the manner described for the abutments, the tooth being ground to fit the model and a coping swaged to fit it.

To assemble the teeth for final investment, place a piece of tinfoil over the model between the abutment. This will answer three purposes: to prevent the wax from adhering to the model, to admit of easy removal of porcelain and give rigidity to the wax which facilitates the removal of the abutments and dummies for final investment and soldering.

The soldering having been completed, and work finished, the porcelain teeth are then set in place with cement.

It might be well to suggest that a record be kept of the number of the mold of each tooth used, and, if you should ever be called upon to repair the bridge, you will be glad to find that you do not need to remove the entire bridge and will spend but a few minutes in repairing.

Let me add that the encasement would appear about as Fig. IV when complete and ready for final application.

(To be continued.)

DENTAL THERAPEUTICS.

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As we have already said the methane series, as they are used for anæsthetic purposes, produce some effects on the vascular system, but most likely through their primary action on certain of the nerve centers. The effects of chloroform and ether on the muscular and nerve fibers is of extreme interest when these agents are employed for anæsthetic purposes, in as much as these agents are used solely for the purpose of lessening pain, by placing the individual in an unconscious condition. Waller has shown that when a frog's nerve is exposed to chloroform or ether vapors, even in the most dilute form, it at first increases the irritability for the time being, but if continued the reactivity of the nerve fibers gradually lose their irritability, while on the other hand, if a strong form of the vapor of these agents is applied the loss of irritability of the nerve is very instantaneous, at least in the majority of instances.

The sensory nerve fibers, as we have said before, are said to be paralyzed much more quickly than those of the motor fibers. Pereles and Sachs have shown that when the sciatic nerve is exposed to a solution of these agents and afterward stimulated, the flexor muscles contract and the extensor muscles remain in a non-reactive condition. However, it will be remembered that we have already stated that in the normal animal almost the opposite phenomena exists. peculiarity, as yet, has had no explanation. It might be said that Albanese has tried to explain this phenomena as being due to the extensor muscle nerve endings lying more superficially than the others, thus giving them the opportunity to be acted upon by the anæsthetic very much more quickly and much more effectually. It has been shown that by locally injecting ether into the body it will cause local paralysis of the part, which is sometimes followed by neuritis, and in some cases a permanent weakness has been observed in the part.

When defibernated blood is shaken in vitro with ether or chloroform it dissolves the red blood corpuscles, setting free the hæmoglobin. It is said that chloroform retards the reduction of oxyhæmoglobin by forming a loose combination with the hæmoglobin itself. But it is well to state, however, that such a condition has not proven to be true in the circulation of the blood when chloroform is inhaled as an anæsthetic. When chloroform is absorbed in the body it does not exist in a simple solution, but it combines with cholesterin and lecithin of the red blood corpuscles.

Chloroform and ether seem to have peculiar and variable effects on the pupils of different animals, and their effects on the pupils of man differ very considerably in different stages of anæsthesia. In the first and second stages of anæsthesia there is a dilatation of the pupil, which is usually due to general excitement and anxiety, and can not be said to be specific in any event. When the second or third stage of anæsthesia is reached a contraction of the pupils takes place, which has all the appearance of natural sleep, which shows that the central nerve centers are affected. After ether or chloroform has been administered, until the patient is allowed to come out of the anæsthetic and profound consciousness has been obtained, it will be observed as consciousness reappears in the individual dilatation of the pupils will again appear as they did in the primary stages of the anæsthetic, all of which is undoubtedly due to the excitement, as in the case when the patient is being anæsthetized.

It will be observed in animals dying under an anæsthetic that just before death takes place the pupils become dilated. This phenomenon has been explained as caused by asphyxiation of the muscles of the iris. But it has been observed, however, that the same condition might exist in animals that die from other causes than that of anæsthesia.

The anæsthetic effects on the alimentary canal and the respiratory tract are presumably due to local irritation, resulting in reflexes. Thus we have an increased secretion of saliva and mucus, which is due to irritation causing increased activity of the glands, which can readily be arrested by the application of atropine. The rhoncus that is observed in anæsthesia has been supposed to be due to the saliva passing down to the bronchial tubes, giving the rattling sound that is so frequently heard. There is perhaps but little foundation for such a belief, for it has been observed that when a tube is passed back into the tracheal opening in animals, this condition will exist just the same. The irritation in the respiratory tract is usually very much greater when the fumes of ether is inhaled than chloroform; consequently we have the explanation for the more frequent vomiting in ether anæsthesia than when chloroform is administered, it

being due almost entirely to the local irritation of the mucous surfaces. The irritating vapors of ether not only extends well down into the throat, but may be taken into the stomach with swallowed mucus, thus producing the irritating effects to the mucous membrane of the stomach which invariably leads to reflex vomiting.

Some authors have attempted to explain this vomiting as being due to direct irritation of the medullary centers, but apparently the best scientific thinkers upon this subject place the entire cause to irritation of mucous membrane of the air passages, by the vapors of the anæsthesia being carried back into the stomach with a flow of mucus from the salivary glands and mucous surfaces. This explanation sounds more reasonable than that of the irritation to the medulla. However, it might be stated that the stomach and intestinal tract are but little influenced in their movements by anæsthesia.

There has been considerable speculation as to just what effect anæsthesia has on uterine contraction during parturition. According to the best authorities there is a question whether it has any very material effect when administered in moderation; but in the profound stages of anæsthesia the contractions are slow, which is probably due to the fact that the irritability of the spinal cord is lessened in the deeper stages. Chloroform and ether, beyond question, passes into the feetal blood, and, according to some experiments, the anæsthetic can be forced to the stage in which death of the fœtus is produced. This cause may be either by the direct action of the drug on the fœtus or by lowering the blood pressure in the mother, and in this way leading to asphyxia. It does not seem that anæsthesia, in a moderate form, produces any special deleterious effect on the human being. It might be said, however, that the child in a great many instances shows that it has been affected by the anæsthetic, which manifests itself by an increased nitrogen excretion for several days in the urine.

During an anæsthetic stage the temperature usually falls from one to two degrees in fifteen to twenty minutes. The cause for this action is most likely due to the heat passing out of the dilated blood vessels of the skin. Another factor may be present in this process, namely, that of lessening the heat on account of the muscular movement being diminished. Some writers are of the opinion that the anæsthetic acts directly upon the heat centers, but according to the

best authorities there probably are no reasons for believing that these agents act upon the heat centers.

In the last few years there has been considerable discussion as to the effect chloroform and ether have on metabolism of the tissues. It is generally a considered fact that, owing to the action of chloro-· form on the nervous system, it produces quite marked changes on the nutrition of protoplasm. It must be remembered that increased metabolism occurs only in the higher forms of life; in other words, it is the nervous system that influences the phenomena of cell nutrition, for it has been conclusively demonstrated that the unicellary organisms are very easily destroyed. Even by very dilute solutions of chloroform fermentation and putrefaction is prevented with extreme easiness. The action of ferment, such as pepsin and rennet, is very much hindered when large quantities of chloroform are added, but if a small amount is added the fermentive action is very much increased. It takes rather large quantities of chloroform to kill plants, but a very small amount will prevent assimilation of carbonic acid.

There are many evidences in man and in the higher animals that there is a considerable change in the nutritive function of all the organs and tissues of the body, quite aside from the known action of the nervous system. The observation has been made that fatty degeneration in various organs of the body is produced in the repeated administration of chloroform. The organs that are most likely affected are usually the heart, kidney and liver. However, it is well to state that this process does not always confine itself to those organs, as it has also been observed in muscle tissue. course, if such a condition is continued for any great length of time, the results may be quite unfavorable, but, as a rule, the fatty changes recover very easily. Selbach found that after a long narcosis with ether that the tissues showed some sign of fatty degeneration, but soon disappeared. If chloroform is given for some time in small doses it will produce atrophic cirrhosis of the liver, and also certain changes will be manifested in the kidney, spleen and lungs. This fatty degenerative change is always manifested by the parenchymary cells.

(To be continued.)

OPERATIVE DENTISTRY.

A SERIES OF SHOP TALKS.

BY R. B. TULLER, D. D. S.

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No. IV.

SOMETHING MORE ABOUT THE PORCELAIN ART IN DENTISTRY.

Aside from continuous gum work (plates with platinum as a base over which porcelain is spread and baked), the porcelain art in dentistry of real practical value is of comparatively recent date. That is to say, a decade ago there were but few dentists who were putting porcelain into everyday, practical and successful use in the way of crown and bridge work, and more particularly inlay work, which, by the way, has more recently made rapid strides in favor, both with the dentist and his patients.

It is frequently, if not always, necessary to educate the people up to an acceptance and appreciation of some of the advancements and innovations of our profession. This is not always an easy thing to do, and especially when a portion of our craft who have not acquired these up-to-date methods, make a business of discouraging and depreciating the things they are not able or prepared to do.

This is largely a matter of diplomacy, if we may say, for self-preservation, rather than a really candid conviction that the newer method is without merit. It is hardly to be expected that Dr. Smith, who is an expert in gold fillings, is going to cheerfully send his patrons across the street to Dr. Jones, who is an expert in porcelain fillings (inlays), nor laud his work, if he can convince them that his own old, reliable gold way is still the proper and best thing as a preservative, and the correct thing as regards appearances, or, æsthetically considered; but the writer knows of several instances where the gold worker, with no faith in porcelain inlays, and who did not want any faith in them, became intimate with the work through opportunity, when their views materially changed and they became enthusiasts and advocates. This is perhaps the general rule. First there

is doubting and hesitancy, and no doubt properly, since many things do take the stage and hold attention for awhile that have no real or lasting merit. It takes good discernment, together with a bit of experience, to separate the wheat from the chaff, and porcelain inlay work was so contrary to the general principles of holding most any other filling in place that it was hard to be convinced that a little thin layer of cement was going to do the business, when cement fillings were known to last but a short time, on account of disintegration, and metal fillings would only stay in cavities when anchored.

But porcelain work all along the line, and especially the inlay, will come more and more into use as the years roll by. Its merits and reasonable permanency have been proven beyond peradventure, at least in the hands of those who understand.

All the world is advancing, and especially we of the Occident, and many of the crudities quite peculiar to Americans or the Yankee nation, due of course to a country comparatively new to civilizing influences, have begun to drop away, and culture and refinement to take the place of some of our striking provincialisms. One of the customs quite peculiar to America (and to be more exact to the United States), and noted throughout the rest of the world, not without some derision, was, and still is, to some extent, that of displaying gold in their teeth and especially in the most conspicuous portion of the mouth, the front teeth, not to mention that abominable outrage to fine sensibilities, the golden tooth entire-gold incisors and cuspids. We have been the laughing stock of cultured Europe and other lands for the craze we have of wearing, as they say, jewelry in our front teeth. Anyone who has spent a little time abroad knows this, and knows that by these golden spots the serving class spot the "rich Americans," and plan to secure more and larger "tips" than they expect or try to get from others. As our people become more cultured; or rather, as more of them become cultured, the more they refrain from displaying jewelry in their teeth and the more they seek and appreciate something less barbaric. Among these people of advanced ideas, and especially those familiar with European culture, it is not difficult to find a ready ear for the virtues of our substitute for gold, which so faithfully approximates Nature's handiwork. If the author could influence the making of a law to cover this matter, it would be worded to make it a misdemeanor. if not a crime, for a dentist to put on a gold crown immediately

in front (anterior to the bicuspids) or for anyone to wear one in front, and it is wiser to say anterior to first molars; and in some mouths anterior to the second molar. In the writer's belief there are few conditions in the mouth where crowning is indicated, that a porcelain or porcelain and gold (in combination that is not offensive) may not be placed by a good experienced worker, as well or better than a gold shell.

This is not true of every operator's work in porcelain, but it means that thoroughly expert operators in porcelain can put a crown of porcelain where a gold shell crown can be put. The time is coming when such work will be pretty universally demanded.

In many instances this work of crowning takes on the nature of inlay work instead of the porcelain crown with cope and dowel. That is to say an inlay may be made to restore any lost portion of a tooth from a small cavity to the entire tooth outside the gingival border.

Some operators are by nature gifted more than others in the ability to comprehend the principles involved in porcelain work, and especially the color or shading proposition, and artistic taste is called upon in porcelain more than in any other operative procedure. In gold beautiful contours may be produced, but in porcelain fine contours must be made with an exquisite sense of color and shading as well. It has been found that many operators who at first did not exhibit much artistic taste in porcelain have by patience and perseverance become very perfect in it. The dentist of the not far distant future has got to be a capable and efficient porcelain worker, or find he's got into the wrong niche in life.

Porcelain has already got so strong a hold on the patrons of dentistry that it would be as hard to dislodge as to dislodge gold. There will always be a use for gold in dentistry; no fear of that, and there will always be use for porcelain in plates, crowns, crown and bridge work, and in inlays, last, but not least.

Porcelain bridge work has been more or less in favor for a number of years, its failures, when they have occurred, being due more to faulty planning and making of the foundation or skeleton than to the porcelain with which it was afterward reinforced. The metal frame work must have rigidity and strength and the porcelain in connection must have sufficient hold, bulk, and the proper fusing.

Over fusing produces not porcelain but glass, and it fails to fulfill the requirements. It is friable, easily cracked.

Inlays must have bulk to have sufficient strength to withstand mastication, and any slender portions of thin margins are sure to give way. In places not exposed to stress porcelain inlays may be made in almost any shape or proportion that a cavity is likely to take, provided it can be withdrawn, and is made to fit correctly with as much cavity surface for hold as possible. The ideal inlay in one sense, that of hold, was the round tapering hole and the round tapering inlay or porcelain that fitted in like the glass stopper to a bottle. Rarely have we such conditions, but the idea of the glass stopper may be kept in mind in shaping cavities with an effort to get some such conditions of hold. If course there are variations of this to the round or almost round saucer shape, as well as all sorts of irregular shapes. The well fitted inlay needs no undercuts, if it has been properly etched with good hydrofluoric acid. (This acid deteriorates when exposed to the air; hence bottle should be kept corked tightly.) Some writers have elaborated in writings and cuts on the value of undercuts and channels made in the inlay as well as in the tooth just prior to setting for additional hold for cement. If the cement was stronger than the inlay there might be some virtue in the method, but very little at that, and particularly in so minute an affair as an inlay usually is. If a porcelain dinner plate is to be mended what is done? The two edges are brought together as exact as possible, each minute nodule finding its own recess, and the cement forced out as completely as possible by pressure. Sometimes it will break elsewhere before it breaks in the same place.

What happens if the two parts are not brought in perfect contact and cementing attempted? Just failure, that's all. Would one expect a better joining if he were to take and grove out a portion of each broken edge so that he would have more cement between? No rational man would with a cement not as strong as the porcelain. The only place that a bulk of cement is of any use in behind an inlay is, in case of metallic inlays, over the pulp region to reduce conductivity. We use cement sometimes to fill in undercuts to enable us to form a cavity that a matrix will draw from, but the inlay is no better for that, nor not as good as in close fitting contact with the tooth. The inlay should be pressed to place as hard as can consistently be done forcing out all but a thin film, and so held

until the cement sets. The more cavity surface hold that can be got the better. Steps when consistently and properly made add usually to the holding. We see beautiful illustrations now and then of how Dr. So. and So cuts his cavities to make good holds, but the cuts look as though the doctor had taken a sound tooth to begin with and one solid all through (no pulp anywhere to interfere with the ideal shape). In practice we begin with decayed teeth mostly (sometimes a broken one, but it generally has a pulp), and we have to get the decay out of all its ramifications and then we have to shape it up if we can so as to withdraw an impression or matrix; but, we can keep in mind the ideal and keep as near to it as it is possible.

It should not be forgotten that the porcelain art in dentistry is the art that conceals art, and the cultured and æsthetic are going to have it; and more and more as the years go on.

(Continued next month.)

"TOOTH-BRUSH DRILL."

NOVEL RECREATION FOR LONDON COUNTY COUNCIL SCHOLARS, CONDUCTED BY THE TEACHERS.

A new feature has been added to the curriculum of the London County Council Schools.

Habits of health and cleanliness are henceforth to be inculcated in the form of what may be known as "tooth-brush drill."

Already in one East End school instruction has started, and every day, immediately before the morning "break," all the children, ranging in age from four to thirteen, are marshalled in line and receive instruction in the proper method of cleaning their teeth.

The children are greatly amused at the new drill, and take it very well indeed. After each drill the master or mistress in charge will personally examine the pupils to see their instruction has been properly carried out.—The Dental Surgeon.



TOOTHSOME TOPICS.

BY B. B. TULLER.

TEETH.

Teeth without plates.

Teeth by our gingivo-pneumatic process.

Teeth without metal-all porcelain.

Just as good as natural teeth in every way.

Better—they never ache nor have pyorrhea.

Dentistry revolutionized by Dr. Martin Damlier's new process.

No matter what the shape or condition of the mouth, one person can be fitted as well as another.

No bridges to get foul, and no plates to drop when talking or eating.

The greatest discovery of the age: Dr. Martin Damlier's gingivopneumatic process of holding teeth fast, each tooth held by a particular grip and suction of its own, and "solid as a rock"—if the gum will only hang to the bone.

If one by any chance should get knocked out, it is only necessary to carry a duplicate set of loose teeth in the pocket to be able to instantly replace any tooth in the head.

If by chance several should be knocked down one's throat—you hear of such things—they have no predisposition to bring on appendicitis, nor are they constipating. If one or more should get into the appendix they will readily eat their way out, making an operation entirely unnecessary.

Dr. Damlier has, with years of experience as a general practitioner of world-wide reputation, worked on the development of this gingivo-pneumatic process, until success crowned his untiring efforts; and since its perfection it has been exhibited and demonstrated before individuals and conventions of the leading lights in dentistry, and to the faculties and teaching force of nearly all colleges, to the great surprise and amazement of them all. With one accord they all threw up their hands and exclaimed: "This indeed is the most important discovery of the age in dentistry! This will revolutionize our practice! Will wonders never cease?"

And, while they could but acknowledge and admire the great achievement of Doctor Martin Damlier, they instantly recognized that a good many talented dentists would have to go to sawing wood.

But the great public, the people—ah, how we do love the people—will benefit beyond all calculation. Dr. Damlier's gingivo-pneumatic process of inserting porcelain teeth is so faithful and true to nature that not even a dentist, except by the most intimate examination, could tell the teeth were only porcelain, and unquestionably they are one of the greatest boons to humanity ever recorded. The wonder is that the Almighty overlooked this process when he created man. Dr. Damlier would not disparage nor reflect upon the work of the Supreme Being by any means, but he is confident that if the porcelain art, and especially dental porcelain art, had been developed as it is today, when man was made, Dr. Martin Damlier would have been anticipated in this great gift he now gives to humanity. Dr. Damlier now has the process patented in all countries and is prepared to prosecute all infringers.

Dr. Damlier's porcelain teeth for the millions do not decay or corrupt, except possibly in the mouths of people who might persist in using hydrofluoric acid for vinegar; and even this may be prevented by beginning the meal with hot paraffine porridge.

Dr. Martin Damlier is a man of striking and wonderful personality, and one would expect on entering his presence, something more and better under his advice and counsel than from the average dentist, or even the sometimes reputed talented leaders. Dr. Damlier can, at a glance, tell any person whatsoever or whomsoever what their needs are in the way of dentistry. It is wonderful but true. He never misses once in a million times, or, at least, he has seen over 787,500 people and never failed yet. It is simply impossible to do this by the old methods and processes of performing dentistry, or by any other process than Dr. Damlier's gingivo-pneumatic.

Thousands of dentists have importuned Dr. Damlier to be put wise as to his wonderful method for a remunerative consideration, but Dr. Damlier rather give the benefit of his knowledge and discovery to the people. The only disciples of Dr. Damlier are in his

employ in some of the several luxuriant parlors in a number of the largest cities, so in no other parlors, or common, every-day dentist's office, can anyone secure the great benefits of Dr. Damlier's process. Come to headquarters at Nos. —, —, —, — State street.

Dr. Damlier occupies two entire floors of the immense building he is located in, and is negotiating for the entire building. The entrance to these luxuriant parlors may be easily located by two bushels of extracted human teeth in a glass case mixed with two bushels of Dr. Damlier's new process teeth, and it is very difficult to pick out the porcelain. Another thing marking our entrance that can not be overlooked is our richly liveried porter who can not be outdone in Chicago, and whose business it is to bestow the great-boon-to-humanity literature on passersby and escort ladies to and from carriage to elevator, and to impart information which elevator to take (special) to reach Dr. Damlier's exquisite dental parlors.

(The doctor would esteem it a favor if carriages and automobiles would approach from the north and depart by the south, so as to avoid the confusion incident to a rush and jam. Secure a carriage check from the porter so that he may call your carriage when you desire to depart.)

Dr. Damlier desires to especially invite mothers to bring their children when they are molting their baby teeth, for, instead of the child being obliged to go toothless between the old and new, or second teeth, Dr. Damlier can insert little teeth to take and hold the place of an extracted baby tooth until the second tooth is fully developed. Did you ever hear of this before from your ordinary dentist? I guess not! Dr. Damlier is the only dentist on earth who can do this. Dr. Damlier loves little children who are just shedding their teeth, and gives them his personal attention. Don't let your little ones appear grotesque, when it can be entirely avoided. Keep the little pearls all there in an unbroken row.

Now, just take note of this: Suppose by some accident a person loses one or more prominent teeth, roots and all, to what ordinary dentist could they go and have them replaced in a few moments with teeth as good as their own, perfectly matched up to those left, so that friends would not note any change? Aha! Not to one. Dr. Damlier is the only great dentist who can do this. It don't make any difference whether a tooth has been out a minute, a day, a week, a month or a year, Dr. Damlier can replace it instantly so that one

would not know the difference. If desired, a gold tooth may be inserted in place of porcelain.

When teeth are inserted by the Dr. Damlier process the patient can go out and immediately eat a meal as well as when all their natural teeth were in position—if she has the price left.

Here are a few unsolicited testimonials out of the several hundred thousand received:

"Dear Dr. Damlier: I am, as you know, 84 years old and expect to see 100; especially since I knew you. I feel that in a large measure you have renewed my vitality. I lost my teeth years ago and for fourteen years wore two plates. Thanks to you, I now have a set of teeth equal to those I had in youth, and I can eat a rubber shoe, raw or boiled. When I came to you, you took my two plates, which were no good, and threw them into a hogshead nearly full, I observed, of the same worn-out and misfit affairs, and in thirty minutes I had in a set of your patent gingivo-pneumatic teeth that made me twenty years younger, and with which I could bite off a big chunk of Navy plug. You are the great or greatest Damlier, and marvel in dentistry.

"JASPER JORDAN."

Solemnly sworn to before me, this day of our Lord............

1905. Jeremiah Jenkins, Notary Public.

Witnesses: Thos. Torkin, Eben Stokes.

"Dear Dr. Damlier: I'm on earth again and lifting 100 lbs. to the square inch. You remember me. I was the man you done work for knone as the man with the *iron* jaw. I earned my \$300 a week in the ring and shows until I lost my teeth. Then I was laid off. Had no other stunt to work. I was nearly ready to go and commit suicide or any old thing when I met you. You took out a few old scraggly roots and right away set in your ginger vo new matic teeth. In a week I had a new contract for irn Jaw work and ken do all my old stunts cumpleat. Yours you bet

John Dover,

The Man with the Irn Jaw.

"Dear Dr. Damlier: I want to testify to what you did for my baby girl. She lost two front baby teeth, and you immediately put in some new ones that looked just exactly like her own, and she wore them until the new teeth were fully formed, and then we had to work

to dislodge them. So help me. Mrs. Martha Townsend."

Danforth, October, 1899.

Remember the name and the bushels of teeth when looking for the best dentist on earth; also catch the eye of our porter and he will guide you safely into Dr. Damlier's most magnificent and sumptuous dental parlors, State street.

AN INTERESTING LETTER FROM A PATIENT.

Dr. Geo. W. Cook, Chicago.

Dear Doctor and Friend—I send you a letter which I received some time ago and which may be of interest to you. I have no further use for it, as my patient has wisely changed his attitude and is now wearing the questionable full upper with satisfaction to himself and me.

Feb. the 8ht 1906.

Mr. Dr. Dentist.,

Dear Sir.

you will no doubt be very much Surprised at my long delay in writeing you, or calling in your Office to see you in regard to thoes teeth you was makeing for me., Well I will just say my luck has been HARD this winter. caused from sickness and other misfortunes. so I hope you will be as much pleased as you or Surprised, and that you will not get offended and will excuse my bold way of writing to you., also my scatterning remarks regarding my teeth. Now Dr., I have been in Business. and also I have feelings for all honest business men. as I know it is very unplesent to do business with the Public, or with customers that or hard to please and give intire satisfation everyway. but I allway had to please my customers and treat them kindly if I done any business with them. and put up with all thure grumbling and make the best of it. so you may apply thoes above statements with my case, as I am a customer of yours or some one els, and also I ame to be pleased with my purchases I make with everbody if I do any business with him at all. Now I have got to the point whear I can write what I wish to tell you regarding thoes teeth. now I will just say that you need not to finish thoes TEETH at all. as I can not use them at any price. for 6 reasons I do not want them at any price. (1.th is they will not stay in my mouth. second is I cant eat with them. third, I can not spit with them. fourth, can not talk with them. fifth, I do not look Natural with the teeth in my mouth. and they set to much forward. Sixth they was to short, and my back teeth wood not come togather so I could chew my food, and you know that I could not use that kind of teeth at all, and another thing is you wood not Garenteed the teeth to me. thearfore I do not want the teeth at any price, as I can get them at Indianapolis for \$5.00 and they will Garentee them to

me also, in case I wanted them. I have been needing teeth vary much for the pass 90 days, but as I have dune without this long, and my gums become so hard. I will just remain this way for a while, as I am a poor boy, and have not got the money to spare at the present time to buy teeth or to finish paying on them eather one I want to be honest and kind to ever body, and I ame for them to treat me the same. now Dr. I have payed you \$12.00 sence you taking my teeth out, and also I have made several trips to your office seeing about haveing my teeth made, but thoes trips was all in vain, and my time lost that was worth \$1.00 per day to me but done no good at all. now I will not viset your office no more, as my last viset to your office was of no benefit what ever to me. now I have respected you and your business as a true friend, by writeing you this letter, as I felt like this trouble wood be against you and your business to talk it over the phone. now I will still assist you as a true friend in your business as before, if you will return to me \$5.00 five Dollars of the money I have paid to you, as I am' a poor by without money or home and need it very badly, and if you think you can not afford to give me back \$5.00 of what I have paid you why it will be all right with me, as I can live without it if you can live with it, as it does not amount to much. but you will loose more then \$5.00 five Dollars. if you do not return the \$5.00 to me. as my favors & influence will all be against you and your business. but if you wlil send me the \$5.00 by return mail. I will remain your wellwishing friends as before, so do what ever you think best about it. (I remain your friend as ever.)

B.....

THE PROPHYLAXIS OF SYPHILIS.

The Pasteur Institute has recently published an account of certain prophylactic measures against the Spirochæte pallida, which are said to be very efficacious in the case of animals. In a series of experiments Metchnikoff and Roux have shown that it is possible to cause abortion of the chancre following inoculation of syphilitic virus on the eyelid of a chimpanzee by carrying out mercurial inunction less than one hour after the infecting contacts. (A curious point is that a solution of sublimate has not the same protective action.) This is indeed practical prophylaxis, and it is to be wished that it may prove to be efficacious in man. What is still better, certain indications seem to warrant a hope that attempts at vaccination might possibly be successful in producing immunity against the disease.—

The Dental Surgeon.

ORIGINAL CONTRIBUTIONS

NASAL CATARRH IN DENTISTRY.

BY C. S. STREET, D. D. S., PHILADELPHIA, PA.

Glyco-Thymoline is indispensable to the up-to-date dentist; with it he finds no trouble in coping with the most difficult cases of abscesses and pyorrhœa alveolaris. Glyco-Thymoline is also useful in a score of other conditions.

A couple of years ago, a young lady, Miss W., consulted me. She said. "I would like you to examine my mouth and see if you think you can do anything for me." She said also that her case had been regarded as incurable. I found the gums had receded, teeth very loose, an extremely fetid odor, patient complained of great pain. I undertook the case, first cleaned up the teeth in the usual manner and began treatment by injecting Gllyco-Thymoline full strength into the sockets, cleaning them out thoroughly. I gave three similar treatments and put her on a mouth wash, Glyco-Thymoline and water, equal parts.

Pain disappeared, gums perfectly healthy, teeth firm. She reports to me for examination from time to time and as two years have elapsed without any recurrence of the trouble, I can safely say she is cured.

I have prescribed a great quantity of Glyco-Thymoline in treating pyorrhœa alveolaris and would use nothing else that I know of, considering it the best remedy by far for this troublesome disease.

For sore throat from smoking I have had instant relief from Glyco-Thymoline. I take a teaspoonful in about as much water and gargle and swallow it.

A patient who was going to have considerable work done came in and said he wished to make another appointment, as he was having a bad attack of catarrh and that the odor was so bad that it would be unpleasant for me. I made a 25 per cent wash of Glyco-Thymoline, cleaned out with spray the nasal cavity and gave him some to gargle with; ten minutes after I was working on him without any discomfort. He has been using it ever since and says it is the best remedy used in twenty years.



NATIONAL SOCIETY MEETINGS.

American Society of Orthodontists, New York, December, 1906. Institute of Dental Pedagogics, Chicago, December 27, 28, 29. National Association of Dental Examiners, Atlanta, Ga., September 14, 15, 17.

National Dental Association, Atlanta, Ga., September 18.

STATE SOCIETY MEETINGS.

Alabama Dental Association, Mobile, May 8-11.
California State Dental Association, San Francisco, May 14-18.
Connecticut State Dental Association, Bridgeport, April 17-18.
Florida State Dental Society, Atlantic Beach, June 13, 14, 15.
Illinois State Dental Society, Springfield, May 8-11.
Iowa State Dental Society, May 1, 2, 3.
Indiana State Dental Association, West Baden and French Lick

Springs, June 26-28.

Kentucky State Dental Association, Dawson Springs, June 4, 5, 6. Minnesota State Dental Association, Minneapolis, June 11, 12, 13. Mississippi Dental Association, June 6, 7, 8. New Hampshire Dental Society, Plymouth, May 8-9. New York State Dental Society, Albany, May 11-12. Oklahoma Dental Society, Oklahoma City, May 14, 15, 16. Tennessee State Dental Association, Nashville, May 15-17. Texas State Dental Association, Galveston, June 14, 15, 16.

Vermont State Dental Society, Brattleboro, May 16, 17, 18.

THE SOUTHWESTERN MICHIGAN DENTAL SOCIETY.

The Southwestern Michigan Dental Society will hold its annual meeting at Niles, Mich., April 10 and 11. Arrangements have been made for a very interesting and instructive meeting. A cordial invitation is extended to members of the profession. Arrange to attend this meeting. It will do you good and act as a spring tonic.

J. H. PALIN, President.

C. W. Johnson, Secretary and Treasurer.

IOWA STATE DENTAL SOCIETY.

The forty-fourth annual meeting of the Iowa State Dental Society will be held at Des Moines May 1, 2 and 3, 1906.

THE NEW JERSEY STATE BOARD OF REGISTRATION AND EXAMINATION IN DENTISTRY

Will hold their semi-annual examination in Trenton, N. J., on July 9, 10, 11, 12, 13. Practical and theoretical work all completed at that time. Sessions begin promptly at 9 a. m. each day.

All applications must be in the hands of the secretary by July 1st. For further information kindly address the secretary,

CHARLES A. MEEKER, D. D. S., 29 Fulton street, Newark, N. J.

MONTANA STATE DENTAL ASSOCIATION.

The Montana State Dental Association held its third annual meeting at Great Falls, February 16-17. A large number of papers were read and many clinics were given and a very successful and instructive meeting was had. Helena was chosen as the next place of meeting and the following officers were elected for the ensuing year. President, G. E. Longeway, of Great Falls; first vice-president, Dr. P. W. Beck of Hamilton; second vice-president, Dr. M. P. Davidson, of Virginia City; secretary, Dr. W. E. Trerise, of Helena; treasurer, Dr. G. H. Taylor, of Fort Benton; supervisor of clinics, Dr. A. D. Galbraith, of Butte.

MISSOURI STATE DENTAL ASSOCIATION.

The forty-first annual meeting of the Missouri State Dental Association will be held this year at Springfield, Mo., June 5, 6, 7, inclusive.

An unusually interesting program is being arranged. A number of men eminent in the profession have signified their intention of being present, and the meeting promises to be the best in the history of the association.

All ethical dentists are cordially invited to be present.

SAM T. BASSETT,

Corresponding Secretary.

A GREAT DENTAL CLINIC.

The Kansas City (Mo.) Dental Society has appointed a committee to arrange for a great dental clinic to be held February 22 and 23, 1907.

The committee is represented by Dr. J. P. Root, as president, and the following chairmen:

J. D. Patterson, essays; D. J. McMillen, reception; F. G. Worthley, clinics; C. L. Hungerford, smoker; T. E. Purcell, exhibits; C. L. Van Fossen, finance; M. C. Carpenter, program; J. W. Hull, publication; R. M. Siebel, arrangements; F. W. Franklin, railroads.

The chairman of the different committees have been at work, even at this early date, and have arranged for quarters at the Midland Hetel, having secured the large banquet hall for the clinics and enough other space for the exhibits, etc. Everything is being planned in a large way so as to make this greater than all former clinics.

The clinicians will be selected from among the most prominent men in their respective lines. One evening will be devoted to essays—limited to two in number—and will be given by men well known in scientific dentistry. A complimentary banquet will be given the clinicians and essayists by the local dentists.

The committeemen back of this undertaking realize its magnitude and expect to exercise the necessary energy to push it to a successful end. All ethical dentists and dental societies are requested to keep these dates in mind and co-operate in making this a great dental gathering and the greatest of all practical dental clinics.

ILLINOIS STATE BOARD OF DENTAL EXAMINERS.

The next regular meeting of the Illinois State Board of Dental Examiners for the examination of applicants for a license to practice dentistry in the State of Illinois, will be held in Chicago, at the Northwestern University Dental School, southeast corner Lake and Dearborn streets, beginning Monday, June 4th, at 9 a. m.

Applicants must be in possession of the following requirements in order to be eligible to take the examination: First—Any person who has been engaged in the actual, legal and lawful practice of dentistry or dental surgery in some other State or country for five consecutive years just prior to application; or, second—Is a graduate

of and has a diploma from the faculty of a reputable dental college, school, or dental department of a reputable university; or, third—Is a graduate of and has a diploma from the faculty of a reputable medical college or medical department of a reputable university, and possesses the necessary qualifications prescribed by the board.

Candidates will be furnished with proper blanks and such other information as is necessary upon application to the secretary. All applications must be filed with the secretary five days prior to the date of examination. The examination fee is twenty dollars (\$20.00) with the additional fee of five dollars (\$5.00) for a license.

Address all communications to J. G. Reid, Sec'y, 1204 Trude Building, Chicago, Ill.

NATIONAL ASSOCIATION OF DENTAL EXAMINERS.

The twenty-fourth annual meeting will be held at the New Kimball House, Atlanta, Ga., commencing 10 a. m. Wednesday, September 14, and ending on the 17th.

The rates per day will be on the European plan, from \$1.50 to \$4.00; American plan, from \$3.00 to \$6.00. Governed by choice of rooms.

Convention hall will be in the hotel and every effort will be made by the proprietors for the care and comfort of the members.

Arrangements are being perfected for those desiring a short ocean trip for reduced rates, via the Clyde and Old Dominion steamship lines, notice of which will be given by circular later.

CHARLES A. MEEKER, D. D. S., Secretary and Treasurer, 29 Fulton street, Newark, N. J.

MARYLAND STATE DENTAL ASSOCIATION.

At a meeting of the Maryland State Dental Association, which closed December 29th, the following officers were elected: President, Dr. H. E. Kelsey; vice-presidents, Dr. A. C. McCurdy and Dr. C. M. Wells; recording secretary, Dr. W. W. Dunbracco; corresponding secretary, Dr. F. Drew; treasurer, Dr. S. C. Pennington; governor, Dr. W. A. Montell.



DR. THADDEUS HAYNIE.

Dr. Thaddeus Haynie, aged 69 years, died at his home in Dallas, Texas, February 15th, of heart failure. Born in Amesville, Va., in 1837, he spent his boyhood in that State. He studied medicine and dentistry in Baltimore, Md., graduating. Two years ago he went to Texas, settling in Dallas. Surviving him are nine children, six daughters and three sons. His wife died about two years ago.

DR. LUTHER W. SKIDMORE

Dr. Luther W. Skidmore, of Moline, Ill., died very suddenly February 23 of heart failure. The deceased was born in Morris, Ill., June 2, 1863. He attended the schools of Morris and graduated from the normal school there, after which he entered the dental department of the University of Pennsylvania, from which he graduated in 1884. Ten years ago he located in Moline and established a dental office, which he conducted at the time of his death. He was married to Mrs. Mary Bick, of Moline, who survives him. Dr. Skidmore was a member of the Elks, Knights of Pythias, Moline Club and the Doric Lodge of the Masons, and was vice-president of the Illinois State Society.

DR. C. E. NEIGHBERGER.

Dr. C. E. Neighberger, pioneer dentist of McPherson, is dead at his home. The direct cause of his death was heart trouble, which was brought to a crisis by the fearful burns which the doctor received by falling over a hot stove and upsetting on his body a kettle of boiling water on Monday evening, December 18th. Although the burns were healing the shock was too great for his weak heart, from which he had suffered at intervals for about eight years. The doctor was 70 years, 10 months and 18 days of age. The doctor had been a resident of McPherson eighteen years since last July and had practiced dentistry in McPherson ever since his arrival there.

RESOLUTIONS.

In respect to the memory of Dr. L. W. Skidmore, of Moline, the Rock Island County Dental Society adopted the following resolutions February 27, 1906:

"Whereas, The hand of Providence has removed from our midst our honored brother in the profession, Dr. L. W. Skidmore; and

"Whereas, In his death we have lost one of our most active members, who until his death evinced a warm interest in the welfare of our association; and as a member of the various societies of the State he gave freely of his time and energy for their betterment and advancement; therefore be it

"RESOLVED, That we, as members of the Rock Island County Dental Society, desire and do express to his family our sympathy and sorrow in their affliction, and our admiration for the professional and personal qualities of our member; he was our friend, ever ready to extend a helping hand to a brother; and

"Resolved, That these resolutions be spread upon the records of our association; a copy be sent to the family of our departed brother, and others to the dental journals for publication.

"W. T. MAGILL, Chairman.

"W. G. HAY,

"H. G. TRENT,

"Committee."



DENTAL TRADE JOURNALS.

The dying sob of a dental journal which was a good journal falls upon our ears.

The trade journals have pre-empted the field; that high sentiment of professional ethics which animated dentists in an older day is dead. We are running to commercialism, woe is me! woe is me! The iniquitous trade journal sits enthroned, and the men of the profession prostrate themselves before it.

By the way, what is a trade journal? It is a publication devoted to some trade or industry. Then there isn't a real dental trade journal published in the United States.

Once there was a man who went out to shoot squirrels. He located an animal in the first tree. He fired, but did not bring down the squirrel; again and again he sent a load of shot into the tree. Then the animal moved—it was an insect crawling along his eyelash. There wasn't any squirrel, and there isn't any trade journal of the kind pictured.

All of the dental journals come to the laboratory, and some of them are excellent and some of questionable merit, but all are honestly devoted to the profession of dentistry. Whatever advertising occurs is confined to the advertising pages; and we will wager that the editors of these publications are as free to publish what they like and to omit what they don't like as the editor of any so-called professional journal can be.

For instance: The Dental Brief is published by the L. D. Caulk Company, but we should regard advertisements of our goods in the reading pages, even the most subtle, as inexcusable. Its editors are men prominent in the profession, who have its interests at heart and whose sole aim is the advancement of the dental profession.

We have no doubt but that these observations apply in general to most of the so-called dental trade journals.

And, by the way, it isn't a bad thing to have the financial support of a prosperous manufacturing concern behind a dental publication.—Brief.

PRACTICAL POINTS.

BY HENRY PEACH, D. D. S.

It must have often occurred to others as it has to myself, to wonder how it is that our professional journals contain so much readable matter, carefully thought out, well written, the result often of exhaustive investigation, and yet conveying so few points that we can put to practical use. One can not help regarding with appreciation the remark of that old dentist who always attended every convention, but was seldom known to pay attention to the papers. His explanation was "that he always came, not for the literature, but because he was never sure what valuable thing his neighbor would spit out." Perhaps we theorize too much; certainly we do not overdo those clinical and practical things which facilitate our work.

I have a mind, if Mr. Editor permits, to note a couple of small things—more or less connected—that in the past have helped me over some troubled ways; partly in the hope, I do admit, that perhaps my neighbor will likewise be minded to "spit out" what may prove to be a pearl of price.

Has it ever been your lot to try and deal with a longitudinal fracture in a lateral incisor? Of course, we did not wish to lose it, because if for no better reason, we always do regard the loss of any tooth or root as a certificate of incompetency, and how large a certificate is an anterior tooth. And yet, in spite of clamps or bands, how difficult is such a case to retain. The parts will work loose, irritation of the membrane along the whole line of the fracture will result; deeper bands forced further under the gingival only increase our difficulty by an immediate acceleration of the inflammation. The method may be well enough known to some, but has it ever been suggested you in such a case to use "How" screws? Drill a very small hole right through the tooth, and, as nearly as circumstances will permit, at right angles to the fracture—first winding binding wire around the crown to keep the parts in situ; the first hole should be drilled near the cervical margin and a second as far up on the root as can be reached. These are then tapped, pieces of the long screw turned into place and the end on each side finished flush. The screws will probably be somewhat in the way in treating and filling the canal, but can be negotiated with a little care. The cavity entering the canal on the palatine surface can then be filled with gold, observing the precaution to again bind the crown tightly with wire and countersinking the retention in each half, thus forming a third tie. A tooth thus fixed has been known to give satisfaction for years, the parts being held immobile. The inflammation quickly subsides, and the appearance is not objectionable.

The second case I would recite is rather prevention than cure. How often the small diameter of lateral incisor roots are prone to split when a dowel pin is used to crown them. Shell-crowns may not be used for esthetic reasons, and porcelain jacket, or, as I would rather say, "Land" jacket, are too often clumsy in appearance; banded crowns of every description on so small a circumference are either too clearly visible or too frequently the cause of trouble. To my mind, the course which offers the least objection, and is the least likely to give offense, is a plain tooth soldered or baked on a platinum base being with its pin of modified form. The root should not be cut flat, but having an inclined plane labially, and a second toward the palatine surface that, labially of course, being cut below the gingival. These two plates will help to form a crutch, which will assist when the tooth is fixed in position to strengthen the root.

Another method having a similar result is to cut the root with a definite slope from the palatine to the labial surface, and have a section of band only on the palatine surface. Then the pin—that split root is too often the result of pin, too large pin—should be made from two small round iridio-platinum wires, soldered together and shaped; this will give the strength required, will not turn, and will seldom split the smallest root. If the tooth is to be soldered to the base, German silver answers as well for the pin as iridio-platinum.—Commonwealth Dental Review.

ATTENDANCE UPON THE NATIONAL.

Scarcely 2 per cent of the dental profession of the United States attend the national dental meeting. That fact in itself is one which should not only command attention but stimulate the development of ways and means to increase the general interest in the national body and augment its membership.—Editorial Extract, Cosmos.

DUTIES OF DENTAL AND MEDICAL SCHOOLS IN TEACHING THE USE OF ANAESTHETICS.

H. D. PETERSON, M. D.

ANAESTHETIST AND LECTURER ON ANAESTHESIA, NORTHWESTERN UNI-VERSITY DENTAL SCHOOL, CHICAGO. .

There is probably no subject in the curricula of medical and dental schools to which so little value is attached and which receives such meager attention, compared with its importance in practice, as does that of anæsthetics and their modes of administration, as is shown by the fact that so few schools teach the subject as it properly should be. With few exceptions schools of today do not give it a fixed place in the regular course of study and such teaching as the student has is embodied in the regular lectures on materia medica and therapeutics, and in his observation in clinics.

The administration of any anæsthetic is an important matter and always carries with it much responsibility upon the part of the administrator; in fact in a large percentage of surgical operations it is really of more importance than the surgical work itself, so far as the safety and life of the patient are concerned. When its importance is realized it will be impressed upon the minds of the faculty that more systematic and extensive teaching should be done in this branch.

It is not an uncommon idea among medical men and dentists that it requires no special skill to administer an anæsthetic, anyone can give it; and yet how far from the truth this is. The fact that the majority of anæsthetized patients recover from the anæsthetic does not disprove or gainsay the dangers which accompany its administration. A surgeon or dentist need have but one death from anæsthesia to forever dispel from his mind any such idea of the harmlessness of an anæsthetic agent.

In the last few years there has been a decided change in the views of surgical and dental men regarding this important subject, more attention is being paid to the safety of the patient as regards the anæsthetic, but the change has not as yet become general. This change is not confined to professional men; often the lay person, especially when he or those near to him are about to be anæsthetized, will make close inquiry as to who is to put him to sleep and what are

the qualifications and ability of such a person, and rightly, too. Patients often fear the anæsthetic more than the operation and what is more natural than that they should seek assurance of safety and of the ability of the administrator. Members of the dental and medical professions who realize the dangers of anæsthesia want a satisfactory knowledge that he who is to give him the ether or chloroform is a safe and experienced person, and the same consideration should be given our patients that we would have shown us.

The question arises, "Can we make experienced anæsthetists of our students?"

We may not be able to turn out each and every student an experienced anæsthetist, neither can we turn out those same students experienced dentists, surgeons, gynecologists or internists, but we can and should give them the same opportunity to be the former as the latter by teaching them the fundamental principles in a regularly placed course of study. It is not enough to teach them the subject as it is now taught in the majority of schools. The teaching should be more systematic and more thorough; it is unwise for a practitioner to anæsthetize a patient and yet be unable to detect danger signals or to treat his over-anæsthetized patient. Often the new hospital interne is summoned to the operating room and told to anæsthetize a patient when, as a matter of fact, he graduated without a knowledge of how to determine when a patient is anæsthetized, when danger signals present themselves, or how to treat them when they appear. This is the fault of the student or of his school. Should his patient, whose very life is in his hands, die, who is to be held responsible? In every general anæsthetic the patient is carried close to the border line between life and death, and the patient, who is unaware of such risk, is too often placed in jeopardy.

I believe that no student, dental or medical, should be graduated without having been thoroughly taught, both by lecture and demonstration, the principles of the subject of anæsthesia any more than he should be allowed to graduate without having passed a satisfactory course in anatomy, materia medica or therapeutics. It has been said "a student can learn how to administer anæsthetics after he leaves school." This is not a safe doctrine, and I believe he is a dangerous man who holds that anæsthesia is a simple affair, that can be done by anyone intelligent enough to hold a cone or mask over the patient's face and see that plenty of anæsthetic is applied. Every dental and

medical school should make the subject of anæsthetics and all that applies to them a part of the regular course of studies set apart as a special subject; its importance demands that it occupy a prominent place. Practical demonstrations should be given, and when practicable each student should give anesthetics in as many cases as possible under the supervision of an experienced operator, for by so doing he will learn the practical side as well as the theoretical.

It may be a strong statement, but I believe a school which will graduate a student who has not passed a satisfactory examination after a systematized course of study in at least the principles of the administration of anæsthetics, is responsible for turning loose upon the public a man who may be a source of danger in that particular work. Further, such a course would impress its importance upon the minds of the dental and medical professions more and more each year and a better and more scientific knowledge would be had of the newer anæsthetics which are now appearing. Each individual would be in better position to judge for himself of their safety and not use them at random upon the say so of the manufacturer or some fellow enthusiast who does not even know their composition. This applies especially to many dentists, as it is well known that he who is ignorant on these matters would be shown no mercy in court for using an anæsthetic with fatal result, if such anæsthetic was not recognized by the medical profession.

When such teaching is done thoroughly and systematically a vacancy now existing in too many schools will be filled and fewer men will be graduated who are unfitted to do such important work.—

North Western.

CURIOUS TOOTH CASE.

At a clinical meeting of the South Wales and Monmouthshire Branch, Cardiff Division, of the British Medical Association, held at the Cardiff Infirmary on January 18th, in the absence of Mr. Lynn Thomas, Mr. William Martin showed a man with a toothplate impacted at the lower end of the esophagus for ten years. About two years ago Mr. Thomas tried to remove it through the stomach, and two months ago it was examined by Killian's apparatus. Skiagrams were exhibited showing the shape and position of the plate.—Dental Surgeon.

AMERICAN DENTAL JOURNAL

SOMETHING ABOUT BRIDGEWORK.

BY W. WUNDER, D. D. S., TORONTO.

I shall endeavor in a short paper to state a few of the difficulties we have overcome, and mention my method of overcoming them, hoping if you do not receive any benefit direct from my suggestions they will bring about a discussion which may result in benefit to us all.

For our impressions we soon found that the only possible substance was plaster-of-Paris; and impression compound, wax moldine and substances of a similar nature must be discarded if we wish satisfactory results.

In our porcelain-faced abutments and dummies we were met with a number of difficulties and were compelled to choose between lack of color and translucency and lack of strength. When we let our backing run only a little above the pins, as had been our custom in our gold plates, we found our facings would not withstand the strain of mastication.

To remedy this a number of means have been adopted, Bryant's repair outfit, Mason facings, reinforcing the tip and the use of Davis and diatoric crowns instead of facings.

The latter two methods I use in my practice as indicated.

Where a Richmond or other pivot tooth is used it is well to use Davis crowns instead of facings, making caps for the roots and grinding Davis crowns to fit, then making cups for them and soldering. For the dummies, cups are made to fit the Davis crowns, which have been previously ground to fit the gum, over which has been laid a sheet of wax the thickness of the gold to be used in the front, slightly thicker behind. After these have been properly articulated on wax the porcelain may be removed, and the bridge soldered without danger of discoloration, checking, etc.

By this method we get the natural color and translucency we so much desire, and in case of breakage of the porcelain, can repair in a very short time. I may say, though perhaps unnecessary, the porcelains are best cemented with melted sulphur.

My method of reinforcing the facings is by grinding them from the pins to the cutting edge and making a backing which extends one-eighth of an inch above the cutting edge. In soldering leave this backing exposed its full length, and let the solder flow over it. This will, when sawed off, give the required thickness at the cutting edge. Grind the backing with wet wheel, running toward the porcelain.

This method I deem most satisfactory when no pins are placed in the roots, as in those restorations of the lower front teeth, which are, I think, best done with open-faced crowns, and all cases where shells or open-faced crowns are used. In case of breakage it is very easy with crown slitters to take a bridge, made in this manner, off and replace with facing. It seems unnecessary therefore to use the other method.

Allow me to say that I use open-faced crowns in other places than on the lower incisor teeth, and to me it seems inconsistent on the part of those who advocate porcelain fillings to denounce properly made, open-faced crowns on thoroughly well prepared and suitable teeth.

My personal opinion is that when an open-faced crown does not last a reasonable time, the dentist has not reinforced it on the tip and all around the crown, and it has stretched and pulled away from the teeth, allowing the entrance of microbes and foreign matter.

Where a bridge extends from a molar to a reasonably sound cuspid in a middle-aged man, or where appearance is of less importance than strength, I would hesitate to either cut off the crown and place on a Richmond or drill into the lingual surface and face with plate and put in a pin.

It is well to put bridges having open-faced crowns on with gutta percha.

The seamless crown, with its beautiful contour and nice points of contact (most important points of all in a crown as regards comfort) will replace entirely the cusp and band crown, as the pressed tin utensil has replaced the soldered one.

A few words regarding dummies: In replacing a short tooth, or in filling the vacancy left by a single molar where it is necessary to leave considerable clearing space between the gums and the dummy, the all-gold dummy, made very easily with a Morrison outfit, is most sanitary and strong.

For bicuspids and molars, diatoric teeth, made in the same manner as described for Davis, answer my purpose better and are much more cleanly than a backed facing.

Where a gold cusp and backed facing is used, and I would not use that method if other methods would answer as well, one, perhaps new to some present, is in my hands, reasonably successful.

Bevel the facing from pins to cutting edge, back projecting backing beyond the tip, but do not bend the pins, make cusps in die plate to suit the case, place in proper position and carefully remove in soldering pliers. Solder with twenty-karat solder where they unite. Cut off surplus backing and adjust to facing, bending pins. Articulate cusps by bending upward into place. By this method a very nice joint can be made between the porcelain and the gold, and as no borax can get at facing there is less liability of checking. It also does away with the difficulty of getting the solder to flow into the joint.

In conclusion, I see the time coming when the mechanical dentist, with his beautiful, sometimes, but almost always poor-fitting bridge, will be a thing of the past.

I owe the members an apology, as my paper is hardly what one would expect from the notice card. Your president asked me a month ago to give a paper on bridgework. I said I would do it if he would arrange for a number of papers on the subject as he had on porcelain fillings. I thought nothing more about the subject until he telephoned a week ago. I wrote this paper that evening, and have not had time since getting notice card to either change it or write a new paper. Indeed, I hardly knew what was desired, but think papers of a practical nature and containing personal methods are what we should have at the Toronto Dental Society.—Dominion Dental Journal.

A CASE OF BLENNORRHAGIC STOMATITIS.

BY DR. JUERGENS.

While the pathogenic agent of a certain type of inflammatory disturbances of the oral mucous membrane in children has been found to be the gonococcus, in adults it is indeed a rare occurrence to observe stomatitis in which the direct cause can be traced to the microbe of specific urethritis.

The case reported by the author was that of a man suffering

from severe stomatitis involving the entire lining of the mouth. The morbid process was particularly intense in the vicinity of the gums which were covered with a layer of greenish fætid matter easily removable, although the slightest contact of the instrument brought about a sanguine exudation. Around the lower molars and in the region of the chin the superficial epithelium had undergone a destructive process, and in its stead several ulcers had formed. The pain was so severe that it was with difficulty only that the patient could open the mouth. At night the secretion of the inflamed tissues was so abundant that it interfered decidedly with the patient's rest and comfort. The treatment which at first proved unavailable had consisted in the use of solutions of potassium chlorate, aluminum acetate, potassium permanganate, etc. The phemonena did not abate until the use of mercuric chloride solution one-tenth to one-seventh of 1 per cent. As the patient had suffered shortly before the onset of the stomatitis from an attack of specific urethritis, it could have been supposed that the gonococcus had been a factor in its causation. A bacteriological examination, however, revealed the presence of a number of fusiform spirilli and bacilli (such as found in the case of Vincent's angina) and no gonococci. It was after repeated and careful examinations only that the specific diplococcus was finally discovered. Inoculations from the greenish gingival deposit in a Wertheim culture medium confirmed the diagnosis of blennorrhagic stomatitis .- Berlin klinische Wochenschrift, Berlin.

CAVITY MARGINS FOR INLAYS.

Every portion of the cavity, and in particular the edges, should not only be well shaped, but brilliantly polished. With small Arkansas stone-points a beautiful finish can be obtained, which should extend over the edges, giving everywhere in the neighborhood of the cavity a polished surface from which it is easy to remove the matrix. It is folly to attempt making a perfect matrix against a sharp, uneven, or rough edge, or to expect always to remove it without accident from a cavity round which rough surfaces have been left.—N. S. Jenkins, Dresden, Germany.

DENTAL FISTULAE.

BY PROF. PAUL RECLUS, FACULTY OF MEDICINE OF PARIS.

The author describes a case which came under his observation at the beginning of his surgical career. A man suffering from a facial fistula of long standing had been subjected to a series of surgical explorations, curettings, incisions, but all without avail. Finally a canine tooth was removed and inside of three days that which had resisted the action of strong caustics, the surgical knife, etc., healed without leaving the slightest trace of its previous existence.

The picture of this typical case remains in the author's mind as vivid today as at the time of its occurrence. Consequently when, some time ago, a woman patient presented herself at the hospital with a characteristic fistula of many years' standing upon the sternocleido-mastoid region the author at once referred the patient to a surgeon-dentist for the extraction of two diseased bicuspids on the same side of the face, and the patient recovered at once. is an interesting one in view of the fact that the disturbance had been diagnosed as a bronchial abscess by several distinguished surgeons, who intended to treat it by performing a delicate and dangerous operation in the vicinity of the carotid sheath. Dental or odontopathic fistula in some cases follow a rather extensive path, opening at points far removed from the seat of the primary infection. many are the cases on record of fistulæ opening under the eye, in the temporal, occipital and parotid regions, in the supra and infrahyoid regions, in the subclavicular spaces, and even in the upper thoracic region. The author recalls a case in which the fistulous opening of an alveolar abscess upon a root fragment was located under the clavicle near the sternum. A physician diagnosed the case either as an osteitis of the clavicle or sternum or a sterno-clavicular arthritis.

The author's description of the pathology and usual clinical history of these conditions is here omitted, being matters of common knowledge among dental practitioners. His word of warning affects the general practitioner rather than the dentist, although it may nevertheless be well to state that cutaneous fistulæ originating in a focus of infection about a tooth root may be confounded with chronic cellulitis, malignant tumors, and actinomycosis.—Archives de Stomatologie, et Journal de l'Anæthesia, Paris.



Among the perplexing questions in dental education are these: How shall the colleges and State Boards of Dental Examiners harmonize the work of examinations? What shall be the range of questions that State Boards shall subject graduates from dental colleges to in determining their qualifications and their ability to go out to practice dentistry?

According to the laws of some States, the State Boards of Dental Examiners have the right to call into question the material that is to go out and practice dentistry. The National Association of Dental Examiners have also established the right to say what shall be considered a reputable dental college, by stipulating in their rules that a dental school must have, as a preliminary requirement, a High School diploma or its equivalent. As a further protection for the people, in many States the students are at their graduation subjected to examinations by the State Board before they can practice their profession.

To the face of all this there is, perhaps, but little serious objection. But, if we come to analyze the problem, we ask, what right do the people have in asking the dental profession to protect them from incompetency and ill-defined judgment in the practice of dentistry, when there are but few States in the Union that have offered to pay anything toward the education of the individuals who are to practice this important branch of the healing art?

There is no professional calling in life, where the health and happiness of the people is involved, in which there has been as much effort on the part of the profession to advance itself to a higher standard, and in which as much proficiency and skill has been attained to as in that of the dental profession. Have the people or the public contributed anything toward this advancement? No, they have not! The profession itself has attained to all of this through its own efforts and by its own financial means. It has raised the standard and effi-

ciency of dentistry to a point where the world, in science and art, is coming more and more to look upon them as great achievements of civilization. The question may be asked, What factors have been prominent in this progress? Everyone has to admit that it has been the colleges. Then who of the profession has made the greatest sacrifice for the advancement of dental education in these colleges? It must be stated that these sacrificing ones are the individuals who have given their time and energy to school work without any compensation, or, at least, with so small an income as to make it practically embarrassing to them to be asked, "What is the average income of the dental educator, and how does his income compare with that of other educators?"

It would seem, from all that has transpired in the last few years, that the colleges have been foremost in taking advanced steps in trying to raise the efficiency of practitioners of dentistry. However, on the other hand, no one can fail to see that many colleges have violated the rules of what they, themselves, claim as the proper standard for admission and for graduation. It would seem right and proper that the State Boards should suggest aid and should assist in righting these wrongs; but I question their moral right to come in and dictate absolutely what dental college education shall be, and to subject students to critical examinations, administered in the farcical manner in which they are sometimes carried on.

In reviewing the questions that are put to students to test their efficiency, one is very much surprised to see how absurd and inconsistent, to say nothing of how misleading, these questions sometimes are. As an example: In the subject of Histology a question was asked, "What is a dentical, and how many denticals does it take to make a tooth?" A student, who has any intelligent idea of histology at all, would be very much perplexed as to just how such a question should be answered. The only salvation that the student could possibly have would be that the examiner himself, judging from the question, might have no conception as to the efficiency of the student. While the question is an extreme one, at the same time at least 25 per cent of all the questions that are asked, by all of the various State Boards of Dental Examiners, show that the examiners themselves have very little understanding of the subjects of dentistry, on the side that pertains to a determination of the fitness of young men to practice their profession.

No one would gainsay that the people should be protected from incompetency and quackery, so far as that protection is consistent with the true advancement of dentistry. But I will venture to assert that unless the State Boards of Dental Examiners do not become more proficient themselves in a knowledge of what should constitute an educated dentist, the progress of dentistry will be thrown into a state of confusion from which it will take the profession many years If the various States are to dictate just what a dental education shall consist of, the matter of dental education should then be taken into the hands of the State authorities, and each State legislature should provide ways and means of dental training. But, as the present condition of affairs stands, dental schools will soon become places for students to meet and be quizzed on State Board questions, instead of, as most faculties of the schools have tried to make them, places for the forging of the mind and the storing of that mind with the great fundamental truths of nature, places in which the hand and mind are trained to perform the most delicate and exacting operations that human skill is ever called upon to perform.

Education of the human race has been a subject for discussion throughout many centuries. The question, however, still arises, How much education and training do individuals need to accomplish the best in particular lines of the arts and sciences? In discussing dental education we should never lose sight of the fact that, so long as the dental profession is truly interested in the advancement of its own branch of the healing art, the best efficiency that can be attained under the circumstances, with reference to time and money, will be attained. The exact amount of training and education necessary must be settled by the teachers themselves.

As we have just said, the profession of dentistry has attained a position in America that is second to none. Therefore, all parties should be reasonable in these matters and should continue the interest that in time will produce the highest and best service for the human race, and make dentistry an honor to all who are interested in the preservation of the health and in the usefulness of the oral cavity and the organs therein contained.

What I have said in these few remarks is said with due courtesy to all and for the advancement of all. There is another phase of this subject that I hope to discuss at some future time. G. W. C.



POINT OF APPROACH FOR PULP DEVITALIZATION.

BY DR. G. H. KITTLE, M'PHERSON, KANSAS.

Where it is necessary to amputate a sound tooth as an abutment for a bridge, to approach this pulp in the most painless manner we should approach it at the cervical margin where the enamel is very thin and there seems to be a lack of sensitiveness of the dentine at that point. In a large majority of cases where I have tried it, I found I could bore from the outside into absolute contact with the pulp before any pain was manifested. Then, after we have access to the pulp it is an easy matter to devitalize, by having everything ready beforehand, having sharp instruments. I have been able in four minutes' time to expose and remove the pulp of a sound tooth, which I desired to grind for an abutment, with practically no pain, or such a slight amount as not to be worth mentioning.—Western Dental Journal.

HOW TO VULCANIZE A RUBBER PLATE.

BY DR. J. H. BOYETT, WACO, TEXAS.

My purpose is not so much to teach others as to get the experience of others on this commonplace, but I think very important, subject. And my excuse for writing this paper is the fact that I have seen so many otherwise good dental plates improperly vulcanized.

^{*}Read before Central Texas Dental Society at Waco, Texas, December 12, 1904.

Dr. Barrett, in *The Dental Practitioner*, on this subject, says: "There are various methods of mixing the sulphur with the rubber. It is not sufficient that the two be merely brought together. The sulphur must be in actual combination with the rubber. If a sheet of pure rubber be immersed for a few moments in a bath of melted sulphur, it absorbs about one-third of its weight, but although its color is changed somewhat, it is yet unaltered in its characteristics, because the two are not yet chemically united. But, if it now be subjected to a sufficiently high temperature, combination sets in and the result is what is known as vulcanized rubber. If the melted sulphur bath be at a temperature of 320° F., the absorption and incorporation occur simultaneously. Vulcanization of rubber, therefore, is not the application of heat but the combining with sulphur, which does not take place at ordinary temperatures.

"A temperature of 320° is not necessary for the vulcanization of rubber. In fact, if it be raised to this point the character of the product is materially injured. If the sulphur be thoroughly mixed with gum, and the whole be subjected to a temperature as low as 240° F. for a sufficient time, it becomes vulcanized and will be more elastic than if vulcanized for a shorter period at a higher temperature. Any point above the melting point of the pure gum is sufficient, if enough time be allowed for the combination to be perfected.

With a varied experience of eighteen years, fraught with some successes and many failures, I conclude that there is much truth in what the doctor says:

We vulcanize in too great a hurry. We run the mercury up too quickly, and have porous rubber.

We run it too high and have a brittle plate. I get the best results, I think, by spending about thirty-five minutes getting the mercury up to 320° and keeping it there about eighty minutes.—

The Practical Dental Journal.

SOME DETAILS IN THE CONSTRUCTION OF PORCELAIN CROWNS.

BY J. G. FIFE. D. D. S.

There is no question in my mind, if the root be properly trimmed, which undoubtedly can be done, and the band made to fit, which is perfectly possible, and the band left narrow labially or buccally, irritation of the gum will rarely occur.

There are many methods, or modifications of methods, of the construction of the platinum banded porcelain crown referred to, but gleaning from the methods of some of the best authorities upon the construction of this crown, I present the following details which I am using in my practice:

Produce anæsthesia of the gum by applying or injecting cocain and adrenalin; for this purpose I use the prepared tablets. Incise the crown of the tooth so as to leave the root about one-sixteenth of an inch longer than gum at its most pendant portion, thereby facilitating the trimming of its circumference to a slightly conical shape. Take measure of root with a narrow copper band by pinching its ends together good and tight with Angle's band pliers, working from the lingual side of root. Trim the root end so that it projects beyond the gum lingually about one-sixteenth of an inch, so as to give a good strong pulling hold for band, but at the labial or buccal aspect it should be cut about one-thirty-second of an inch shorter, and parallel to the gum festoon. Construct the band of twenty-eight gauge platinum, unite the ends by filing a lap joint and overlapping the ends one-sixteenth of an inch and soldering with 25 per cent platinum The floor for the band make of No. 32 gauge platinum; tack with solder at the lingual surface, then place band in position and with balls of wet cotton and burnishing closely adapt it to root and band, then remove and finish soldering. The pin should be round iridio platinum wire of the size indicated for the case and should be filed tapering and fitted to the root canal. With the cap in position, punch a small hole in its floor with a pointed instrument and push pin through to its proper position; the pin should project beyond the floor from one-eighth to one-quarter of an inch, or long enough to reach the pins of the facing to which they are to be soldered. Take

the bite and impression with plaster; remove the cap and coat inside of same and surface of pin with a thin film of soft wax, that it may be removed and replaced upon the model at pleasure. Remove all sharp angles of cap and pin and select a facing rather darker than lighter than the indicated shade. In adjusting the facing, let it overlap band so that the blue line of the platinum will be covered; also do not place facing in contact with band, so that room may be left beneath it for the porcelain body. Attach facing to the cap with adhesive wax, and detach altogether from the model and invest in Brophy's investment material or any other suitable compound you may have, making the investment as small as possible. Bend down pins so as to be in perfect contact with post or floor of cap, then put upon a piece of wire netting and place this upon the spider over the flame to heat gradually. In order to get the required heat necessary for flowing 25 per cent platinum solder, the oxy-hydrogen flame must be used. Nitrous oxide and illuminating gas burned together in a properly constructed blow-pipe will, at small expense, produce what is required. You can purchase through your supply house an apparatus of this kind manufactured by L. J. Mason & Co., of Chicago, or you can do as I have done, improvise one. This blow-pipe I will exhibit so that you may note its details; outside of the cylinder and gas the cost is but a trifle. These details thus far apply also to the construction of bicuspids and molars, but in order to insure greater strength to the porcelain in the latter it is necessary to solder to the floor either a short platinum post or a crescentic shaped piece of After cooling the piece is to be removed from the investment and cleaned with the acid bath to remove all traces of borax or other foreign matter. Any surplus of dowel or pins should now be ground away and rounded down, after which the piece should be again subjected to the acid bath and all its surfaces made perfectly clean. The application of the body and its baking is a very particular part of the detail. A shade corresponding to the facing should be selected. The S. S. White high-fusing bodies in use in my laboratory have always given me satisfaction. The dowel should now be grasped by a suitable pin vice, so as to hold it firmly while applying the body and carving. Mix the selected body with distilled water upon a clean glass slab to the consistency of thick cream; apply a small quantity first beneath the pins and under facing and thoroughly settle to place by jarring lightly; absorb the excess of moisture with blotting paper

and continue the process until the required shape is produced. In placing the body it is very necessary that none of it be left upon the band except at the labial or buccal surface, where the facing overlaps the band, as this thin veneer of porcelain is very apt to scale off and produce a rough surface. Owing to the shrinkage of porcelain bodies in baking, two or more bakings of such a crown as this will be required. After thoroughly drying out by placing before the mouth of the closed furnace, the crown should be placed in a perpendicular position in a suitable holder, having in it a hole for the dowel, that the edges of the band may be supported. Place the crown in the furnace and bake until "the body becomes slightly vitrified and the particles well coalesced, but its surface should not be highly glazed at this time."

For the final bake the crown should be again adjusted in the pin vise, and if any cracks are present the thinly mixed body should be well jarred into them, then add body enough to bring the crown out to the full contour, dry out thoroughly, place in furnace and bring to a full and perfect glaze. If there are yet any remaining cracks or roughened surfaces, it will be necessary to add more body and again carry it through the furnace, though if care has been used this will hardly ever be found necessary.

The construction of this crown requires more time than the ordinary Richmond crown or even the banded Logan and, perhaps, than any other crown that we apply, but I am of the opinion it is superior to all others and we should be compensated accordingly. Its advantages can be shown the patient, and in my experience I have found that, as a rule, people who are anything for good work and artistic results are willing to pay for the best service they can get.—The Texas Dental Journal.



A NEW SCHOOL.

The De Ford Post-Graduate School of Anæsthesia is the name of a new enterprise at Des Moines, Iowa. Dr. W. H. De Ford, who is well known nationally, is the head of the school which will have as a specialty anæsthesia in all its branches. This will be welcomed by the profession generally.

CEMENTING ON AN OPEN-FACE CROWN.

In cementing on an open face crown, paste a piece of court plaster over the labial surface so as to cover the opening and flow wax over this, which will strengthen it so that it will hold the cement in place while placing the crown in position. In this way an open-face crown may be attached to a tooth as easily as a full gold crown.—Dr. W. A. Meyer, Gazette.

ICHTHYOL FOR INFLAMMATORY AND SEPTIC CONDITIONS.

Ichthyol is a most valuable substance to reduce inflammatory swelling and in septic conditions affecting the skin. Its disagreeable odor is very distressing to many patients, but it can be concealed by the addition of oil of citronella, 20 minims to the ounce of ointment. Oil of roses also does well, but is very expensive.—

Med. Standard.

ORTHOFORM FOR SORE GUMS.

Give your patient who has had a new plate made a small envelope with a little orthoform in it to the use on the plate where it makes the gums sore. This will remove the soreness. Prescribe Lavoris for such patients. Make it a point to see such cases every day for a few days. A little trimming at the right time saves much discomfort and many sore mouths. If a plate tips loose at one side, examine the occlusion on the opposite side and grind the buccal cusps until the lingual cusps occlude the harder. On either side have the lingual cusps occluding slightly harder than the buccal in platework. Do not put teeth beyond ridge if it be avoided.—Dr. H. W. McMilan, Tri-State.

THE DISSATISFIED PATIENT.

When a patient travels from one dentist to another complaining that he has a poor piece of work, or thinks that he has been overcharged—it is the most self-satisfying thing imaginable to bring to bear all of the professional courtesy possible, and use every effort to convince that patient that the work has been well done, providing that is the case, and if the work is not well done, the less said against the one who did the work the better. And should the patient wish to change dentists, it is undoubtedly the fellow who has good words for all that will get that patient instead of he who would curry favor by abusing and mistreating another.—Dr. F. A. Lane, *Tri-State*.

ORTHODONTIA.

If thumb-sucking in early infancy can produce prominence of the anterior segment of the maxillary arch, can not intelligently and persistently applied manipulative pressure by the dentist or the dental nurse (when we establish this class) or the anxious mother, broaden and direct into proper form the developing arch of the child? Finger pressure laterally in the mouth of the infant after the appearance of the deciduous teeth and before the eruption of the permanent molars and central incisors, could, I am sure, direct the structural development in these growing tissues, and help to overcome the inherited tendencies of past ages of lack of use of the organs.—C. M. Wright, Cincinnati, Ohio.

PYORRHEA REMEDIES.

Dr. Black says in the application of remedies for the treatment of pyorrhea, no caustic remedies should be employed, except, possibly, when disinfection is to be accomplished. Stimulating antiseptics are always admirable and serve to stimulate cell-development and create repair tissue, while keeping the wound free from bacterial interference. The mouth is not so liable to infection as other organs probably because the tissues are accustomed to the presence of bacteria and their tonic products, and have become immune in a measure. This fact indicates also that the pathological manifestations of the gums must have other than a local cause, and we can not expect to cure all cases of phagedenic pericementitis by local treatment, either medical or prophylactic.—Register.

CLINICAL REPORTS. TUBÉRCULOUS ULCER OF THE GUMS.

At the Laryngologische Gesellschaft, Berlin, Hr. G. Lennhoff recently showed a case.

The patient was a woman, aged 35, whose father had died of pulmonary phthisis. She had had exudative pleurisy eight years ago, and had lost thirty-five pounds in weight during the last five years. The lungs were practically sound, as shown by percussion and auscultation, but on the alveolar process of the upper jaw was a flattened ulcer, with a grayish-white base, pale secretion and excavated border. Small nodules were recognizable in the margin. There was also a flat ulcer, also with nodules, on the right upper gums. The disease had begun two years ago, with a slight feeling of soreness and bleeding on the slightest touch. There was no question of syphilis. The absence of any tendency to cicatrization was against any theory of lupus. No microscopic examination had been made yet.—The Dental Surgeon.

A CASE OF SYPHILIS FOLLOWING THE BITE OF A HUMAN BEING.

Dr. James Garvie McNaughton, M. D. Edin., M. R. C. P. Edin., of Manchester, in the *Lancet* of January 6th, writes: "A woman, aged 55, who was sent by her medical attendant to the throat hospital, Manchester, for further treatment, gave the following history of her symptoms. On August 11, 1905, she was bitten on the back of the hand by a woman, and a sore which required about six weeks to heal subsequently formed at the place. About five weeks after the bite spots began to appear on her body, and a little later her hair began to come out.

When the patient was seen by me on December 21 the sore on the hand was quite healed, leaving a dark red scar of the size of a florin. The rash had quite disappeared, but the woman was still suffering from condylomata. Her mouth showed several mucous patches, especially on the inner surface of the lips. In the larynx there was considerable infiltration of the inter-arytenoid region, with ulceration of one vocal cord. The patient is a widow; but there seemed no reason for believing that the disease had been contracted in any other way, and her medical attendant has informed me that a primary sore developed at the seat of the bite. The comparative rarity of the communication of syphilis in this way seems to make the case worthy of record.



Fire.—Dr. Donnon, a dentist at Belle Plaine, Iowa, suffered a loss of \$200 in a fire which destroyed the building in which he was located.

The Fox River Valley Dental Society will meet in St. Charles March 15. This society comprises five counties and a good attendance is anticipated.

Dr. E. K. W. Cornell, first dentist to locate at Elgin, Ill., died at that place February 27. He was born in New York in 1823 and located in Elgin in 1844.

Seriously Ill.—Dr. Eugene L. Mann, of the university dental faculty, is seriously ill at his home in St. Paul. Fears are expressed for his recovery.

Dr. Alphonse E. Raisbeck, a dentist in Brooklyn for fifteen years, died February 26 of pneumonia. The doctor was born at Bridgeport, Conn., in 1850.

Dr. Tunis R. Hane, a dentist in Columbus, Ohio, died at Logan after an illness of three weeks. He was 37 years of age and married. Dr. Hane was a graduate of the Ohio Medical University Dental Department.

Stricken with Paralysis.—Dr. J. D. Hubler of Tylersville, Pa., was stricken with paralysis February 16. The stroke was a severe one and his friends are solicitous for his recovery.

Pi Theta Sigma Fraternity.—The Beta Chapter of the Pi Theta Sigma fraternity of the University College of Dentistry gave a delightful banquet February 23 at Richmond, Va. All the members and many guests from the faculty of the college and practicing dentists of the city were present.

Free Clinic Not Rushed.—Dentists who give their time and skill free to the dental infirmary established by the Odontological Society of Rockford, Ill., are not overworked. Evidently the object of the dental ward is not thoroughly understood as few patients have applied for the free relief.

The G. V. Black Dental Club held its tenth annual mid-winter clinic in St. Paul. Four hundred members were in attendance and many papers and clinics were discussed. Dr. T. W. Brophy performed an operation for cleft palate and also read a paper entitled "What Does the Dental Profession Most Need?" President A. C. Searl delivered the opening address and Dr. G. V. Black gave an illustrated lecture.

Students in Boycott.—Forty junior students at Ann Arbor are on a strike and refuse to attend the lectures given by Prof. Warren P. Lombard on physiology. The students claim that dentistry has ceased to be a profession and had become a trade just like barbers and carpenters. The professor claims to have been misunderstood and that he was encouraging them to uplift their profession.

Dr. A. W. Harlan, for many years one of Chicago's most prominent dentists, and now located in New York, lifted our latch string during the month and brought the sunshine with his genial presence. Dr. Harlan has a very successful treatment practice and keeps two assistants busy.

Red River Valley Dental Association.—At the recent session of the Red River Valley Dental Association, held at Grand Forks, Dr. Argue of Red Lake Falls was honored by being elected its president. Dr. Spence of Crookston was elected vice-president; Dr. Tuomy of Bemidji, secretary; Dr. Tomknes of Grank Forks, treasurer, and Drs. Ralston and Wells, members of the executive committee.

The Central District Society, comprising five counties, met at Pana, Ill., February 20. A good program was presented and a good attendance was had. The new officers elected were: President, Dr. J. D. Reid of Pana; vice-president, Dr. C. H. West of Farana; treasurer, Dr. T. T. Baker of Litchfield; secretary, Dr. W. M. Shaw of Taylorville; librarian, Dr. E. P. Ames of Shelbyville. Five new members were admitted into the society as follows: F. C. Jones, Greenville; S. N. Bowyer, Taylorville, G. N. Mason, Cowden; J. Armstrong, Stonington; H. C. Lacharite, Assumption.

Anaesthesia by Fashion Talk.—Women who regard a trip to the dentist's as among their worst worriments, are interested in the experiment of a young dentist in the West who has introduced an unusual element into his work. He subscribes to fashion magazines from all parts of the globe, which he peruses diligently, and while probing about sensitive nerves he chats of the most recent styles in gowns and the newest colors and the many graceful frivols of which milady's costume is made up. As he is fluent and has a vast deal of information about the all-absorbing subject he manages to lull his patients into thinking that they aren't having such a bad time of it as they would ordinarily suppose. It is said that the dentist's patients have increased tenfold. The publishers of fashion magazines speak of the idea as superb.

Harvard Odontological Society.—"Members will please note that this meeting is devoted entirely to professional subjects and is not 'ladies' night." was the warning sent out with the invitations to attend the twenty-eighth annual meeting of the Harvard Odontological Society, which was held February 24. Seventy members sat down to dinner at 6 o'clock, and after the cigars had been lighted listened to an address by Dr. W. A. Capon of Philadelphia, on "Where Porcelain Is King." The address led to considerable discussion, into which Dr. Henry W. Gillette, Dr. Harry F. Hamilton, Dr. Robert T. Moffatt and others entered. Dr. Ned A. Stanley gave some readings. A business meeting was held in the afternoon, when Dr. Charles P. Briggs of Boston was elected president to succeed Dr. N. A. Stanley of New Bedford. Dr. Capon gave a clinic entitled, "Some Matrix Hints." Clinics upon different features of porcelain work were also given by Ned A. Stanley, Horace L. Howe, Samuel T. Elliott, Harold De Witte Elliott, Coleman Tousey, Robert T. Moffatt, H. W. Hardy, Melville F. Rogers, W. P. Cooke and Albert Fernald.

REMOVALS.

Drs. William Overholser from Milledgeville to Sterling, Ill.; W. S. Bagley from Rock Island to Astoria, Ill.; F. J. Crevier from Montreal to Marine City, Mich.; H. Heykens from Ackley, Iowa, to Manchester; G. S. Krape from Rockton, Ill., to Freeport; William Kocher from Northwestern University, Chicago, to Monticello, Ind.; T. V. Sheean, Minneapolis, Minn., to Franklin; H. B. Sutton from Chariton, Iowa, to Creston; George Coubrette from Crookston to Grand Forks, N. D.; G. W. Tules from Albion, Mich., to Grand Rapids.

Commercialism.—Item of \$15 an hour for professional services while dentist and patient partook of luncheon together; item of \$52.50 a day on occasion when patient failed to appear at dentist's office for treatment; item of \$7.50 an hour when patient canceled engagement; item of \$5 for consultation and investigating references. The foregoing are some of the alleged objectionable charges in the \$1,505 bill presented by a New York dentist to Mrs. Jennie Wheeler, an artist, whose patrons are distinguished society people. She having declared the bill an outrage and refused to settle it, the dentist has assigned the claim to an attorney. "The doctor, I understand, comes from Chicago, where it is a hobby to hold up people," said Mrs. Wheeler today, "and he thought that I, being a woman, would pay rather than submit to the notoriety, but that is where he made a mistake. The bill is outrageous and he will find that I am not afraid to go to court."

Supreme Court Decision on the Burg Case.—The decision of the lower courts in the famous suit brought by Robert Burg against the Milwaukee Medical College was reversed by the supreme court February 23, and the mandamus issued to enforce the presentation of a diploma to the plaintiff was quashed. Robert Burg matriculated at the Milwaukee Medical College, October 3, 1902, with the provision that he must make up certain deficiencies in the entrance requirements within the year. The following day the medical college was notified by the state board of medical examiners that these deficiencies must be made up before the end of the first semester, instead of at any time during the year, as the practice had been theretofore. Burg took examinations that week, but did not pass. In March, 1903, during the next semester, he took an examination before County Superintendent George V. Kelly of Green Bay, and was awarded a second grade teacher's certificate, which he tendered to the college as evidence of his having made up the entrance requirements. This tender, it is claimed, was refused by the college as not showing that the deficiency was made up within the time limit. Nothing further was done until 1905, when Burg, having completed his medical course, asked for his diploma. It was refused, and he applied to the circuit court for a mandamus requiring its issuance. This was granted and the matter was taken to the supreme court on appeal. Several other students of the institution who were in the same class are affected by the decision.

Grayson, Ky., March 12, 1906.

Dr. G. W. Cook,

Editor American Dental Journal,

Chicago.

Dear Doctor: Enclosed please find a humorous clipping from Law Notes by Judge Wilkes of the Tennessee Supreme Court on Dentists.

I thought it so good that I could not help cutting it out and mailing it to you, thinking you may see fit to publish it in the next issue of the JOURNAL.

The JOURNAL is the best magazine I subscribe for and shall always hold front rank in my collection of dental literature. I am, Yours truly,

JAMES T. CAMPBELL.

Judge Wilkes on Dentists.—Judge Wilkes, of the Tennessee Supreme Court, is inclined to be very liberal in his construction of the State statute exempting the tools of a mechanic from seizure. In Terry v. McDaniel, 103 Tenn. 415, he held that a barber was a "mechanic," and in a dissenting opinion in the very recent case of Blackmore v. Dismukes he contends that a dentist belongs in the same category. He says:

"I do not concur in all respects with the opinion of the majority. While I agree that the dentist is a professional man, I see no good reason why he may not also be called a mechanic, if he so desires, and other mechanics do not object, so that he may have the benefit of the exemption laws. There is nothing dishonorable in the occupation of a mechanic.

"A dentist has all the tools that were ever used by any carpenter, and he uses them, and uses them all at the same time. He has saws, and hammers, and picks, and pincers, and augers, and braces, and chisels, and mallets, and if there was any other instrument ever invented or used in the days of the Inquisition he has an approved pattern of it. He has his little buzz saw, that with its music lulls the patient to sleep, while his drill is prospecting for some nerve that up to that time had been quiet and peaceable. Like a carpenter, he builds bridges, and makes excavations, and digs holes and fills them up again.

"I can not conceive how anyone who has ever been under the treatment of a dentist, and survived, can ever afterward doubt that he is both a mechanic and a laboring man. No man can produce the results he does except by hard work.

"It is said that his bills are made out for 'professional services,' and that the amount of them ranks him among professional men, and not merely as a mechanic or laborer. There is great force in this suggestion; but we know that others besides professional men charge high for services. For instance, bank officials, railroad presidents, and presidents of life insurance companies—so that this is not a fair criterion and test.

"While he looks to me like a professional man, and I would not call him otherwise, still I am in favor of saying, at his special request, that he is a mechanic, so as to give him the benefit of the law. He certainly can not support himself without his tools, nor can he practice his profession. All his science and theory can't either pull or plug a tooth without instruments."—Law Notes.

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Good operator to take charge of paying practice, town of 2,000 in North Carolina. Address 77 A. D. J.

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I have some exceptional practices for sale in Chicago and smaller towns. H. J. Bosworth, room 230, 87 Lake street, Chicago.

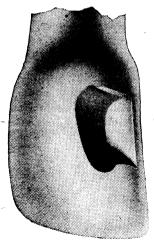
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Office in good location in Chicago. Practice last year \$3,700. Only want pay for electric engine and whatever else you want in office furniture. Address Z., American Dental Journal.

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